



CDH Consulting, LLC
Thornton, Colorado
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Closure Investigation and Environmental Summary

R&R FARMS 29L-441 Wellhead and Flowline

ECMC Remediation Project #38775

Weld County, Colorado

Attachments:

Field Forms

Figure 1 – Site Location Map

Figure 2 – Soil Sample and Field Screening Locations Map

Figure 3 – Supplemental Site Investigation Map

Table 1 – Field Data Summary Table

Table 2 – Summary of Volatile Organic Soil Chemistry Data

Table 3 – Summary of Polycyclic Aromatic Hydrocarbon Soil Chemistry Data

Table 4 – Summary of Soil Suitability for Reclamation

Table 5 – Summary of Metals in Soil Chemistry Data

Photographic Logs

Closure Checklists



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FIELD FORMS

SITE NAME/ REM: R&R Farms 29L-441/38775								DATE: 11/18/2025	WEATHER: H59 L35	
TYPE OF WORK: Flowline Decommissioning								CLIENT: Chevron		
LAT/LONG: 40.365041, -104.468194								PERSONNEL: AP, NB, TS		
ESTIMATED DEPTH TO GROUNDWATER: >20'								SOIL TYPE: SW		
								OTHER OBSERVATIONS: (if FL: ABIP or removed?) FL ABIP		
SOIL SAMPLING								FACILITY INFRASTRUCTURE		
Date	Soil Sample ID	PDOP	PID (ppm)	Staining (Y/N)	Odor (Y/N)	Time	Sent to lab	EQUIPMENT	QUANTITY	
11/18/2025	FLR01@4'	1.1	0.9	N	N	1207	Y	Above Ground Storage Tank (AST)		
11/18/2025	FLR02@4'	1.2	1.7	N	N	1027	Y	Buried or Partially Buried Vessel (PWV)		
								Separator (SEP)		
								Flare (FLARE)		
								Dump Line (SEP-DL)		
								Wellhead		
								Flowline	~658'	
								Third Party Equipment: Meter House		
								Other:		
								Soil Loads Removed		
								IMPACTED SOIL IDENTIFIED?		
								ESTIMATED VOLUME OF IMPACTS:		
								DATE	NUMBER	CY
								Total Removed		
								Disposal Facility:		
								Groundwater Recovery		
								DATE GW ENCOUNTERED:	DEPTH:	
								GROUNDWATER IN CONTACT WITH IMPACTED SOIL?		
								LNAPL OR SHEEN OBSERVED ON GW?		
GROUNDWATER SAMPLING								Date	BBLS	
Date/Time	Groundwater sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?	Sent to lab on ice? (Y/N)			
								Total Removed		
								Disposal Facility:		

NOTES: Flowline abandoned in place due to sharing a common trench with active lines.





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FIGURES

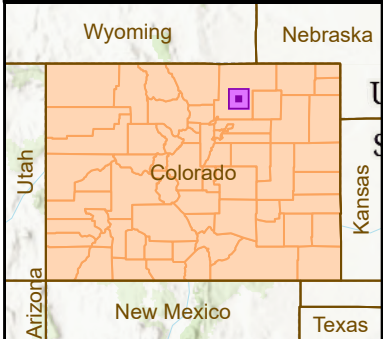
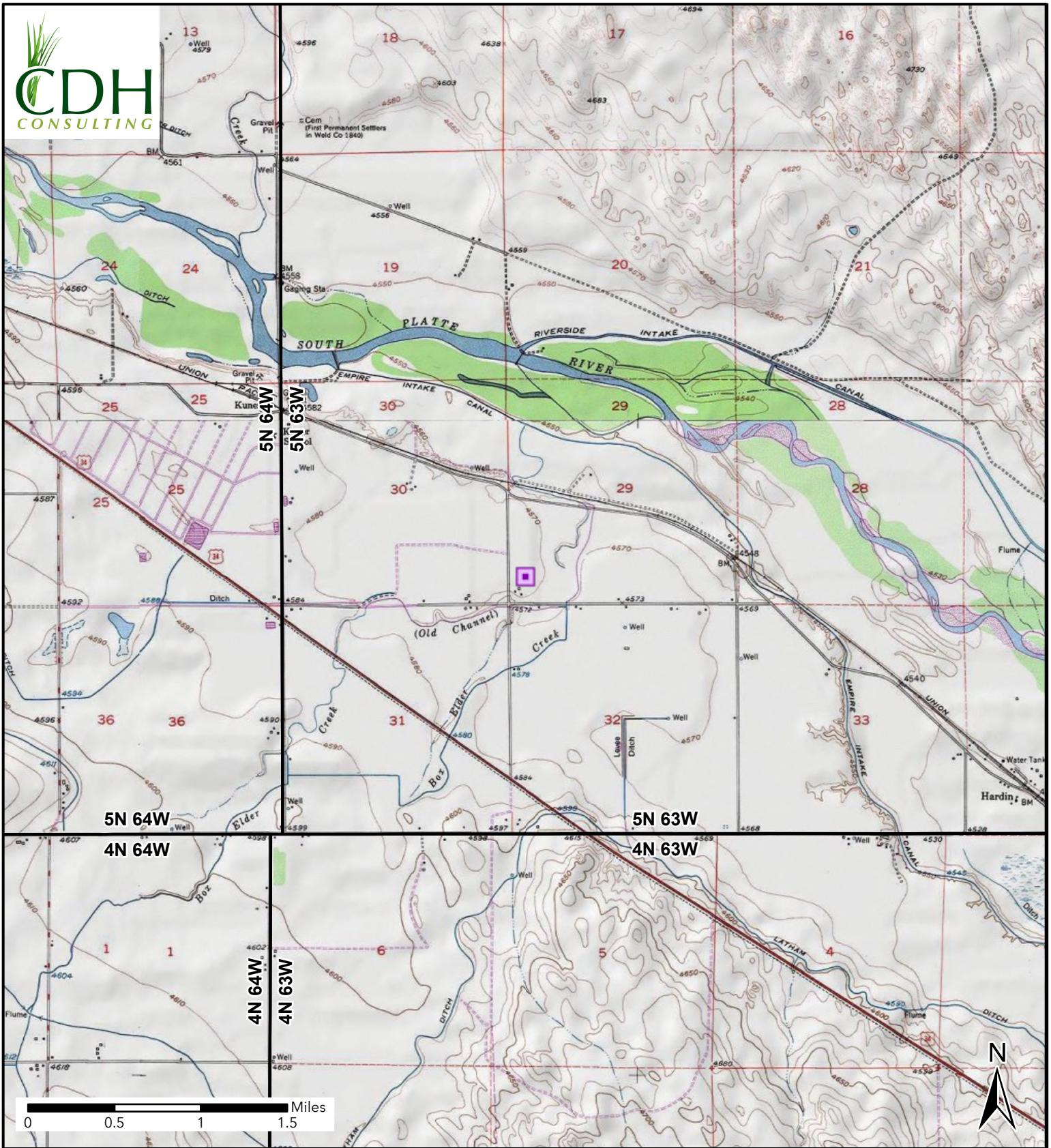
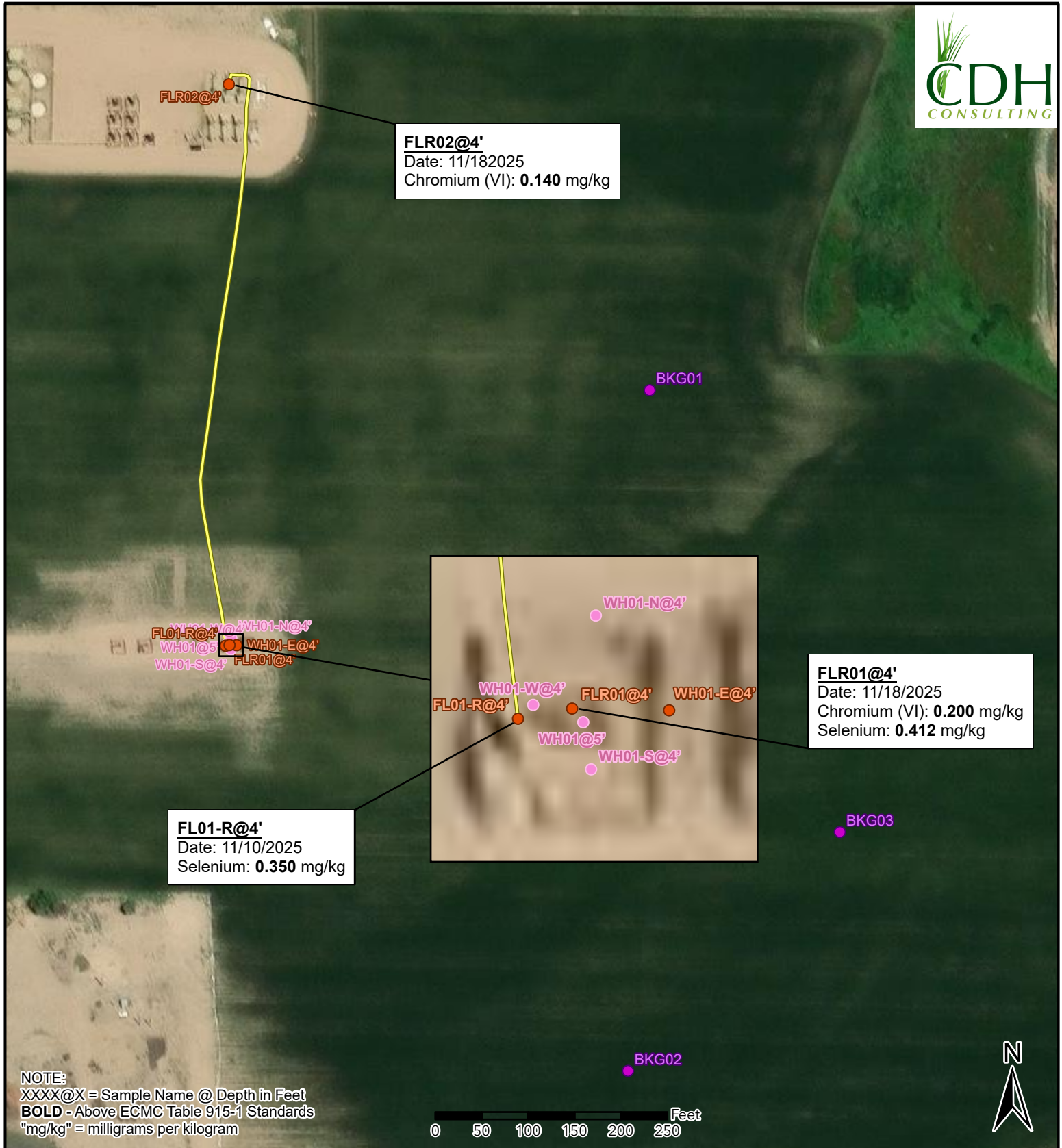


Figure 1
Site Location Map
R&R Farms 29L-441
SWSW SEC 29-T5N-R63W
Weld County, Colorado
PDC Energy Inc

 Site Location



FLR02@4'
 Date: 11/18/2025
 Chromium (VI): **0.140** mg/kg

FLR01@4'
 Date: 11/18/2025
 Chromium (VI): **0.200** mg/kg
 Selenium: **0.412** mg/kg

FL01-R@4'
 Date: 11/10/2025
 Selenium: **0.350** mg/kg

NOTE:
 XXXX@X = Sample Name @ Depth in Feet
BOLD - Above ECMC Table 915-1 Standards
 "mg/kg" = milligrams per kilogram



Figure 2 Soil Sample and Field Screening Locations Map

R&R FARMS 29L-441
 SWSW SEC 29-T5N-R63W
 Weld County, Colorado
 PDC Energy Inc.

- Soil Sample
- Screening Point
- Background Sample
- Flowline Abandoned In Place

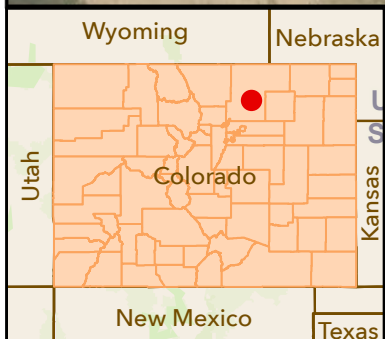
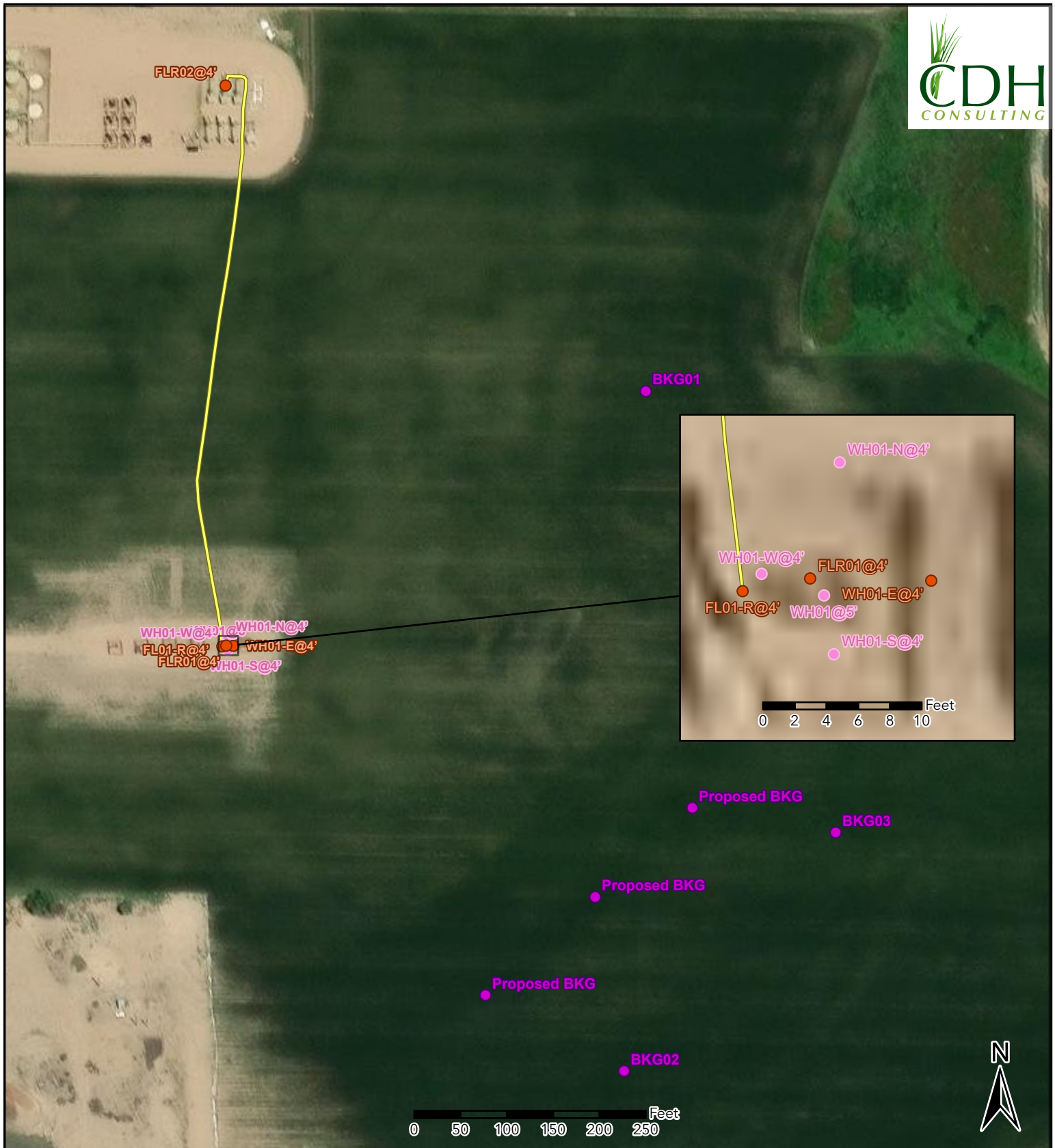


Figure 3
Supplemental Site Investigation Map
R&R FARMS 29L-441
 SWSW SEC 29-T5N-R63W
 Weld County, Colorado
 PDC Energy Inc.

- Soil Sample
- Background Sample
- Screening Point
- Flowline Abandoned In Place



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TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
PDC 69175
R&R FARMS 29L-441, WELD COUNTY, COLORADO
REM # 38775

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)	Consultant Who Collected Samples
			Latitude/Longitude				
WH01@5'	11/10/2025	5	40.365044	-104.468186	1.200000	0.4	CDH
WH01-N@4'	11/10/2025	4	40.365067	-104.468182	1.100000	0.7	CDH
WH01-E@4'	11/10/2025	4	40.365046	-104.468161	1.200000	0.7	CDH
WH01-S@4'	11/10/2025	4	40.365033	-104.468183	1.100000	0.7	CDH
WH01-W@4'	11/10/2025	4	40.365047	-104.468200	1.000000	0.6	CDH
FL01-R@4'	11/10/2025	4	40.365044	-104.468204	1.000000	2.3	CDH
BKG01@4'	11/10/2025	4	40.365787	-104.466547	1.206850	0.0	CDH
BKG02@4'	11/10/2025	4	40.363772	-104.466647	0.785753	0.0	CDH
BKG03@4'	11/10/2025	4	40.364476	-104.465822	0.744066	0.0	CDH
FLR01@4'	11/18/2025	4	40.365047	-104.468189	1.100000	0.9	Montrose
FLR02@4'	11/18/2025	4	40.366706	-104.468178	1.200000	1.7	Montrose

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
PDC 69175
R&R FARMS 29L-441, WELD COUNTY, COLORADO
REM # 38775

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
WH01-E@4'	11/10/2025	4	<0.0011	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<11.72	<0.22	<4.6	<6.9
FL01-R@4'	11/10/2025	4	<0.0012	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0024	23.27	<0.23	8.77	14.5
FLR01@4'	11/18/2025	4	<0.0020	<0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<500	<0.225	<28.0	<112
FLR02@4'	11/18/2025	4	<0.0030	<0.003	<0.003	<0.003	<0.0030	<0.0030	<0.0020	<500	<0.250	<30.4	<122

1. Bold values exceed the ECMC Table 915-1 limit(s)
 2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
 3. * Indicates laboratory minimum detection limit in excess of SSL
 4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg
 5. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s).
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft = Feet
bgs = Below ground surface

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
PDC 69175
R&R FARMS 29L-441, WELD COUNTY, COLORADO
REM # 38775

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
WH01-E@4'	11/10/2025	4	<0.0044	<0.0044	<0.0055	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
FL01-R@4'	11/10/2025	4	<0.0048	<0.0048	<0.0060	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
FLR01@4'	11/18/2025	4	<0.022	<0.022	<0.006	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.002	0.003
FLR02@4'	11/18/2025	4	<0.025	<0.025	<0.006	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.002	<0.002

1. Bold values exceed the ECMC Table 915-1 limit(s)
 2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
 3. * Indicates laboratory minimum detection limit in excess of SSL
 4. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s).
- (<) = Analytical result is less than the indicated laboratory reporting limit.
mg/kg = Milligrams per kilogram
ft = Feet
bgs = Below ground surface

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
PDC 69175
R&R FARMS 29L-441, WELD COUNTY, COLORADO
REM # 38775

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
WH01-E@4'	11/10/2025	4	8.17	0.39	2.68	<0.50
FL01-R@4'	11/10/2025	4	8.15	0.50	0.834	<0.50
FLR01@4'	11/18/2025	4	8.06	1.63	0.819	0.425
FLR02@4'	11/18/2025	4	8.30	0.368	0.729	0.538
BKG01@4'	11/10/2025	4	7.66	3.4	2.53	0.581
BKG02@4'	11/10/2025	4	8.21	0.77	3.30	<0.50
BKG03@4'	11/10/2025	4	8.23	0.59	2.96	<0.50
Maximum Background Concentration			8.23	3.40	3.30	0.581

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. Brown highlighted soil analytical values indicate a regulatory exceedance.
4. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s).

ft = Feet

EC = Electrical Conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligrams per liter

(<) = Analytical result is less than the indicated laboratory reporting limit

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
PDC 69175
R&R FARMS 29L-441, WELD COUNTY, COLORADO
REM # 38775

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WH01-E@4'	11/10/2025	4	2.1	60.8	<0.11	<0.49*	6.4	8.3	4.7	<0.22	<0.11	30.2
FL01-R@4'	11/10/2025	4	4.6	358	0.18	<0.49*	15.5	12.5	10.1	0.350	<0.089	51.6
FLR01@4'	11/18/2025	4	6.94	453	<0.299	0.200	<36.2	12.6	<20.4	0.412	<0.629	<291
FLR02@4'	11/18/2025	4	5.35	151	<0.335	0.140	<40.5	<12.3	<22.9	<0.217	<0.705	<326
BKG01@4'	11/10/2025	4	5.7	364	0.12	<0.52*	14.7	15.8	8.1	0.27	<0.099	49.1
BKG02@4'	11/10/2025	4	1.1	39.9	<0.091	<0.44*	3.5	3.3	2.9	<0.18	<0.091	12.3
BKG03@4'	11/10/2025	4	0.90	24.0	<0.087	<0.43*	2.2	2.5	1.90	<0.17	<0.087	8.9
1.25x Maximum Background Concentration			7.13	455	0.15	NA	18.4	19.8	10.1	0.34	NA	61.4

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
 2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
 3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
 4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.
 5. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s).
- (<) = Analytical result is less than the indicated laboratory reporting limit.
mg/kg = Milligrams per kilogram
ft = Feet
* Indicates laboratory minimum detection limit in excess of SSL
NA = Not analyzed



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PHOTOGRAPHIC LOGS

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025

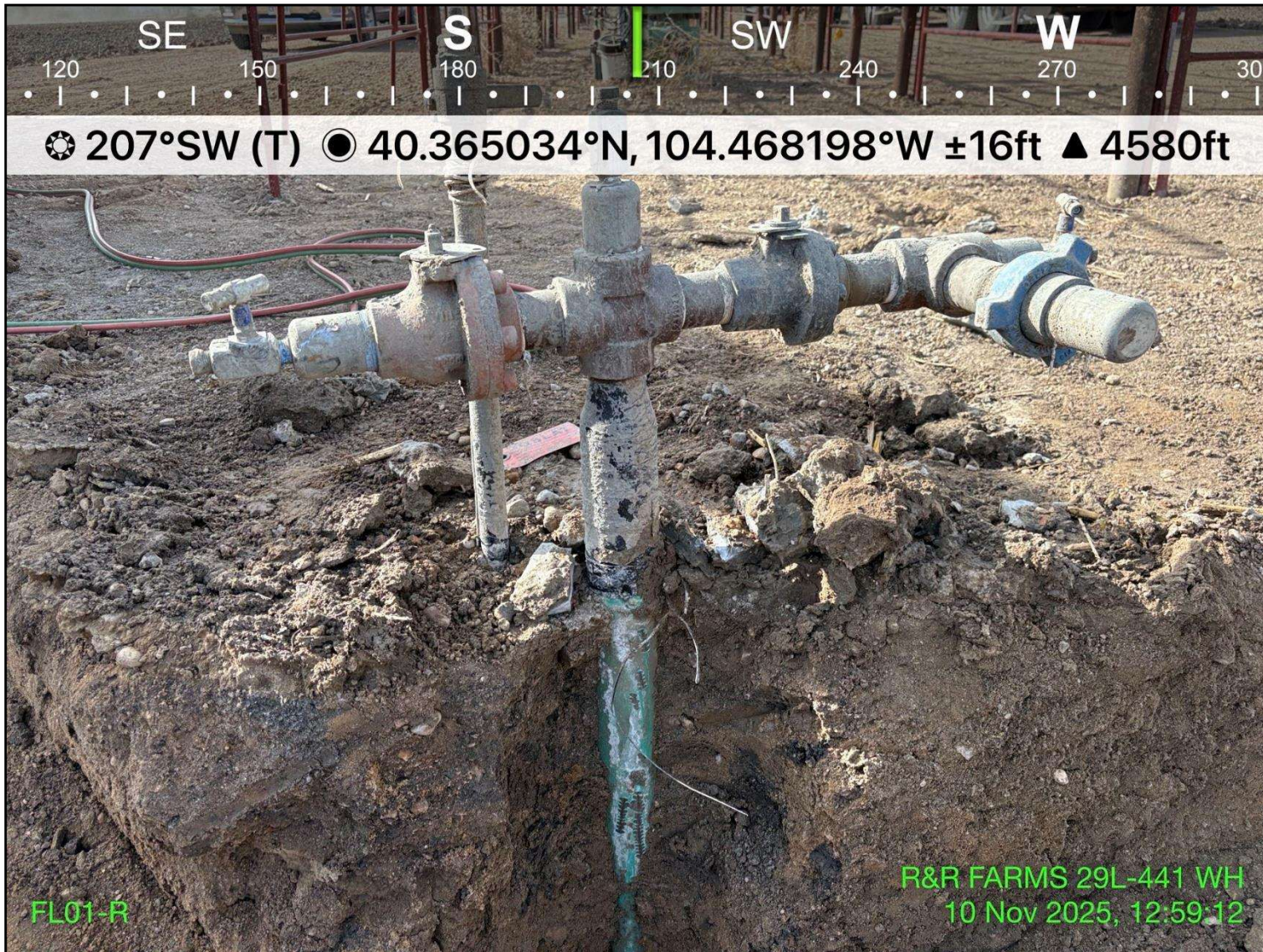


Photo 1: View of flowline riser, facing south-southwest

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025

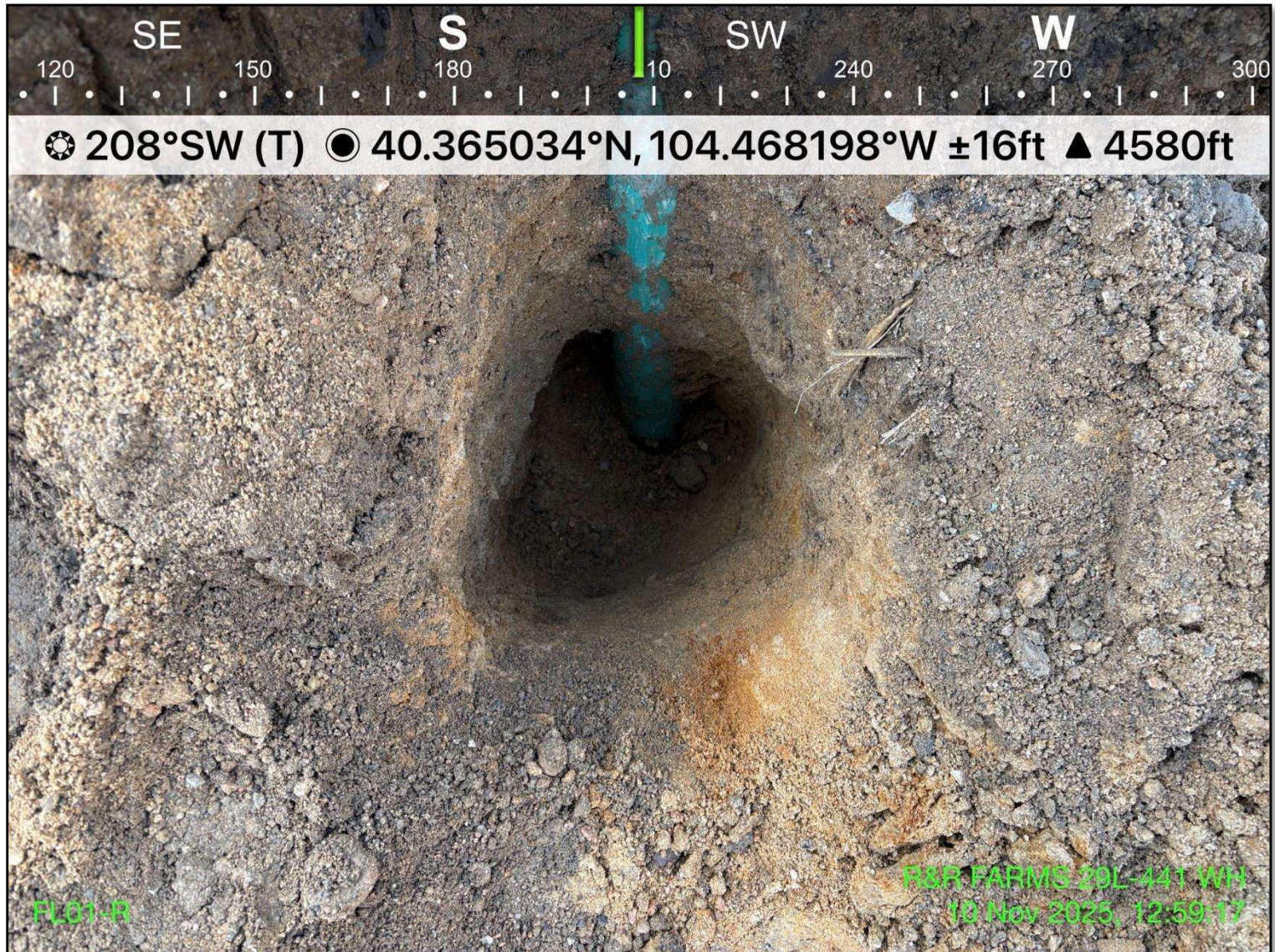


Photo 2: View of FL01-R sample location, facing south-southwest

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025

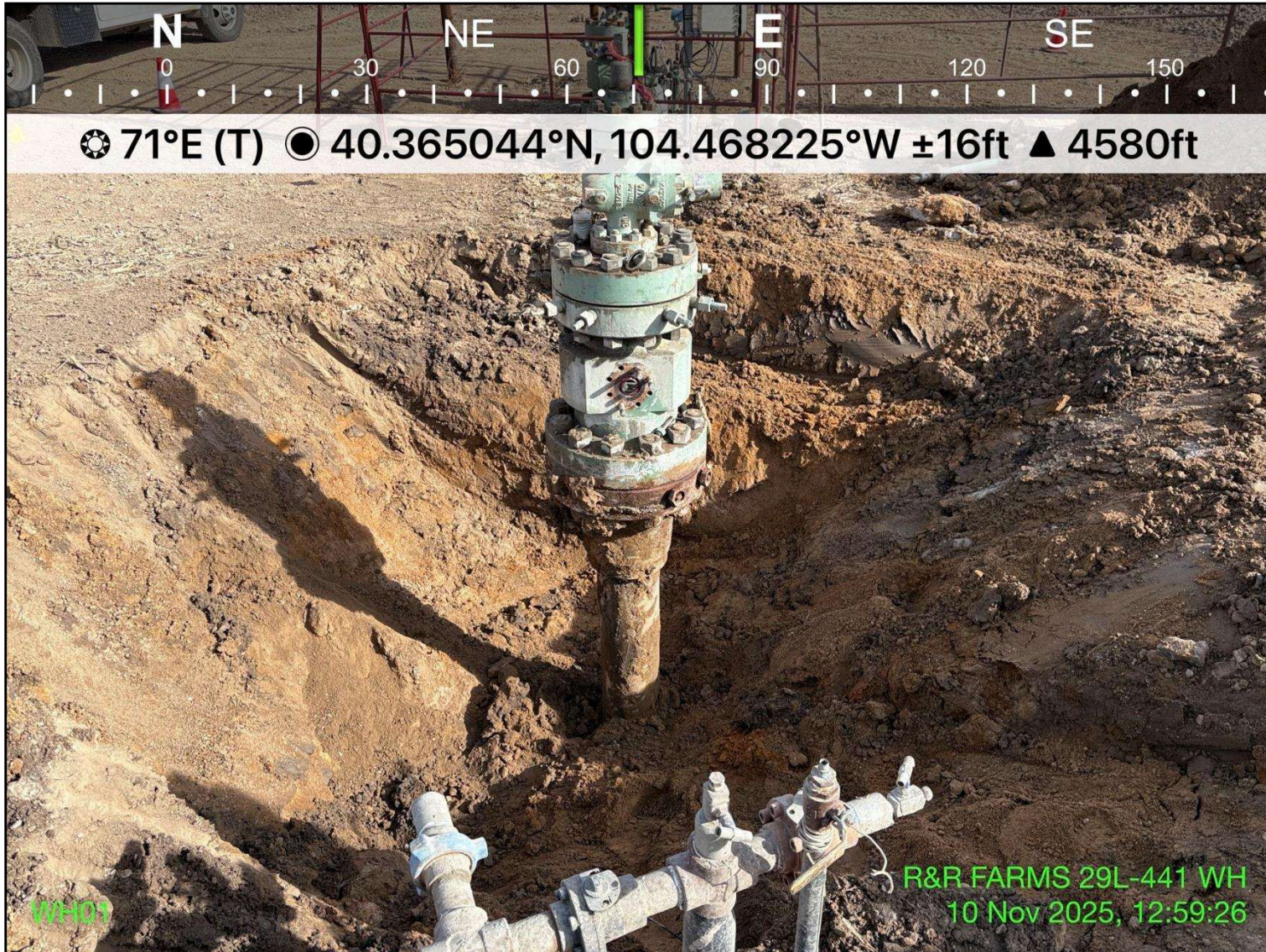


Photo 3: View of excavation extent, facing east-northeast

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025

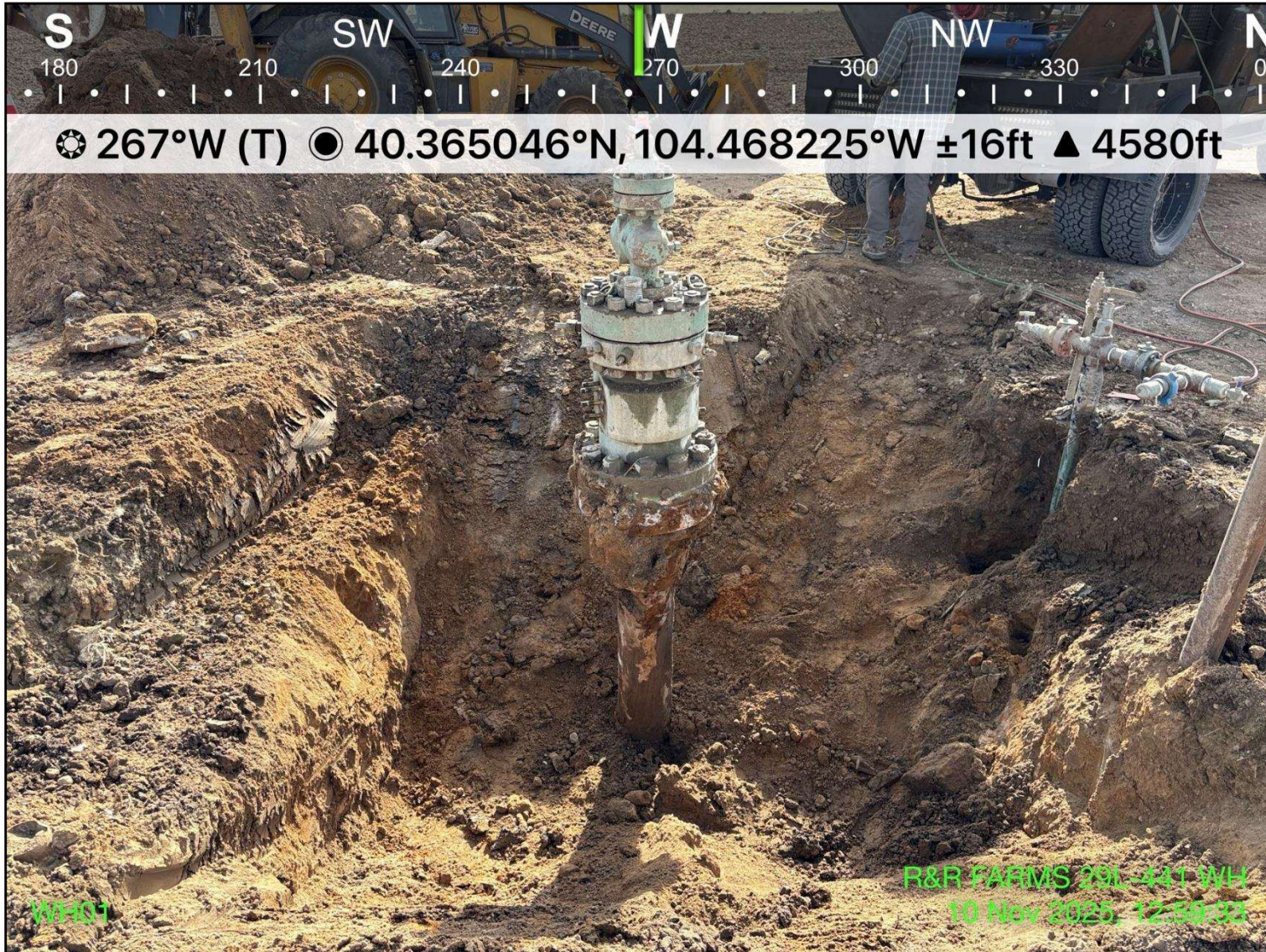


Photo 4: View of excavation extent, facing west

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025



Photo 5: View of excavation extent, facing northwest

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025

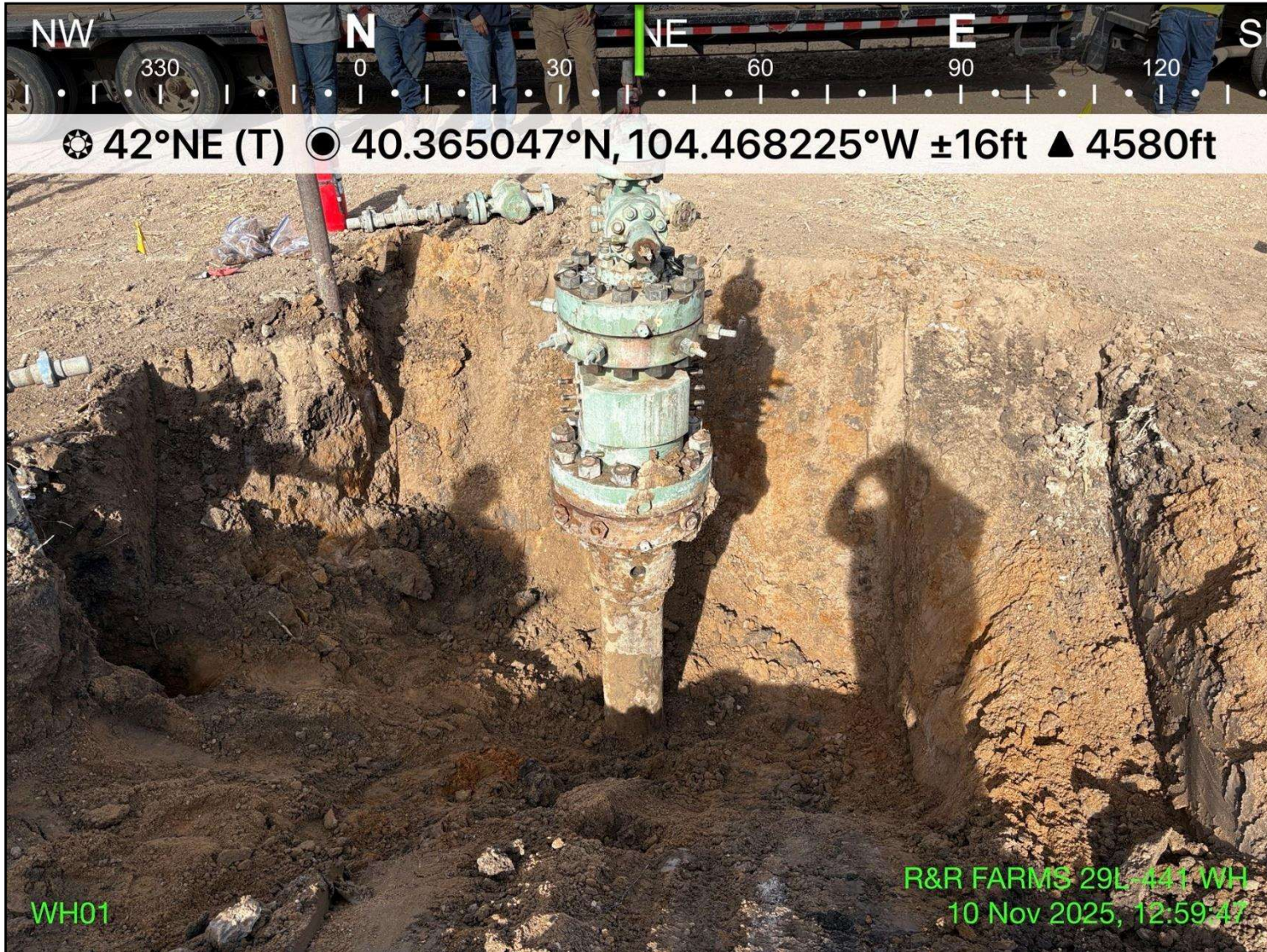


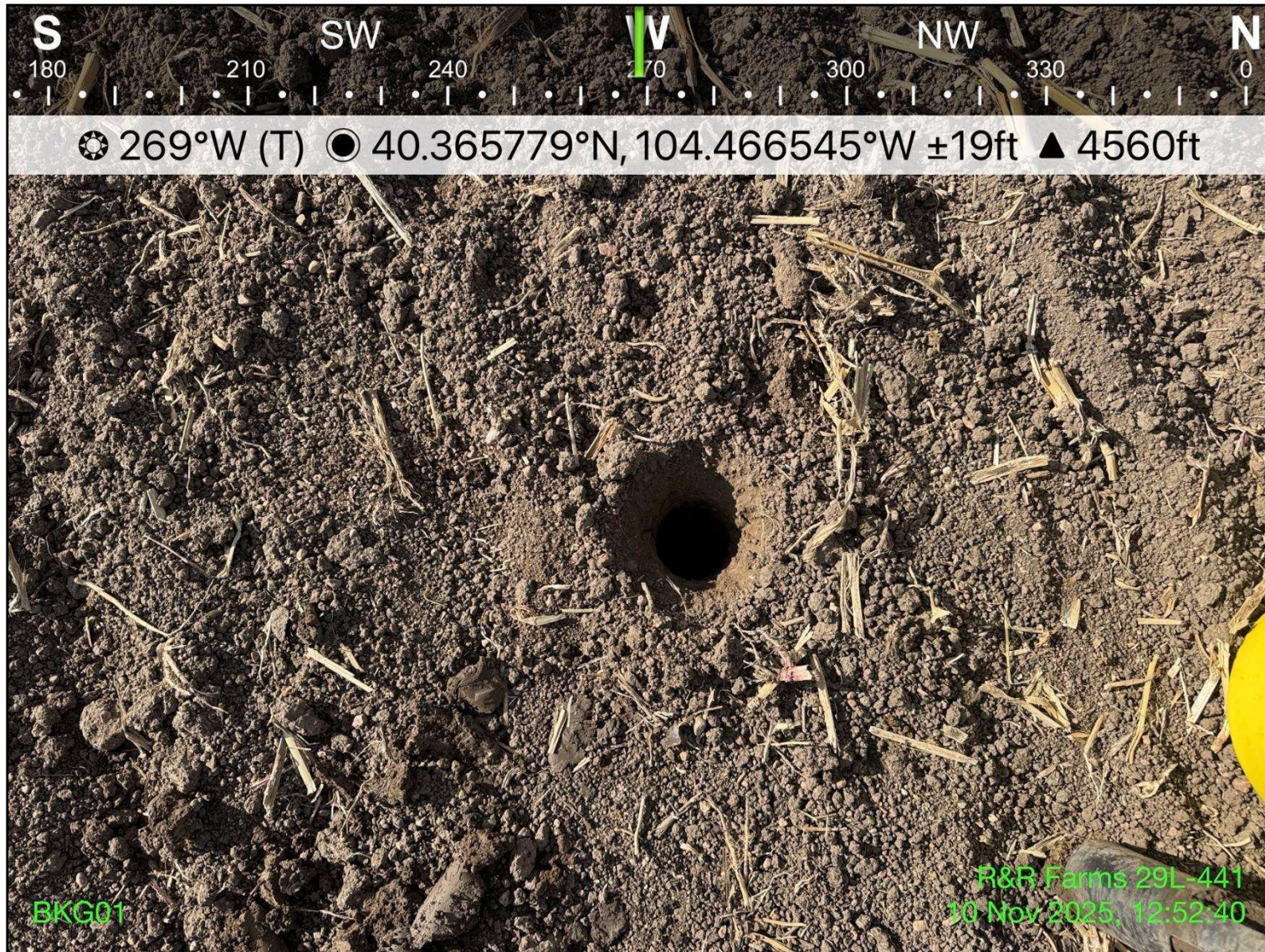
Photo 6: View of excavation extent, facing northeast

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025



View of background location 1, facing west

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025



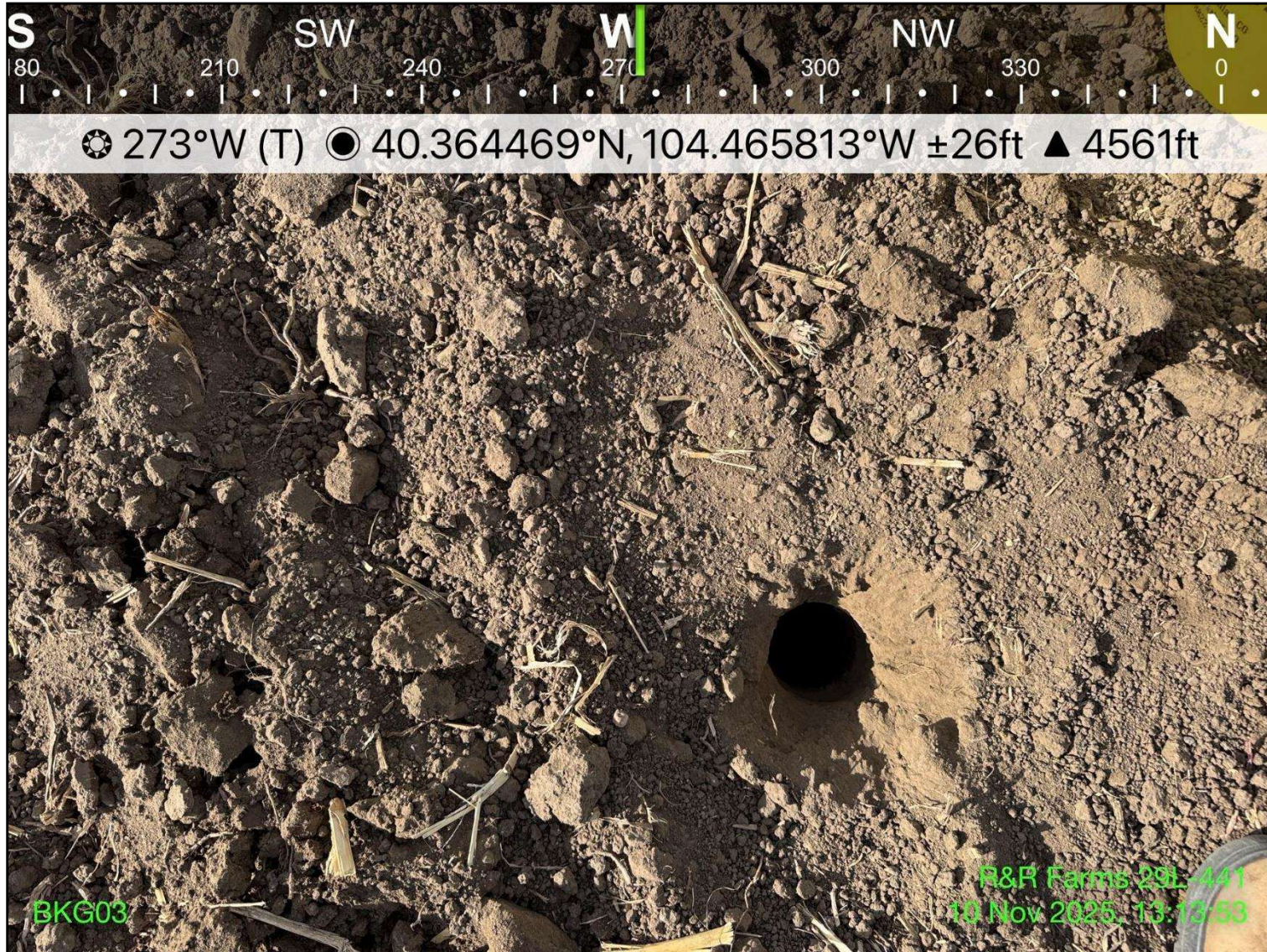
View of background location 2, facing north

Photographic Log

R&R Farms 29L-441 (REM #38775)

PDC Energy, Inc.

11/10/2025



View of background location 3, facing west

Client Name: Chevron		Project Name: R&R Farms 29L-441	Project Location: 40.365041, -104.468194	REM Number: 38775
Photo: 1	Date: 11/18/2025	Description: Representative picture of general conditions at soil sampling location FLR01@4 (40.3650465, -104.4681887) in well graded sand (SW) at the wellhead flowline riser at a depth of four (4) feet bgs (PID: 0.9 ppm). No staining or odor were present.		



Photo: 2	Date: 11/18/2025	Description: Representative picture of general conditions at soil sampling location FLR02@4 (40.3667062, -104.4681784) in well graded sand (SW) at the separator flowline riser at a depth of four (4) feet bgs (PID: 1.7 ppm). No staining or odor present.		
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CLOSURE CHECKLISTS

Wellhead Closure Checklist

ECMC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure	
Site Name & ECMC Facility Number: R&R FARMS 29L-441 / Facility ID #442049		Date: 11/10/2025						Remediation Project #: 38775	
Associated Wells: R&R FARMS 29L-441		Age of Site: 07/28/2015 (Spud date)						Number of Photos Attached: 6	
Location: 40.365041, -104.468194								Estimated Facility Size (acres): ~0.1	
General Condition of Site: Good									
USCS Soil Type: Clayey Sands (SC) and Well-Graded Sands (SW)				Estimated Depth to Groundwater: No groundwater encountered					
Hydrocarbon Impacted Soils / Spills: Not encountered									
Salt Crusted Soils or Impacted Vegetation: Not encountered									
Wellhead(s)									
Well API	05-123-41633								
Age	7/28/2015								
Condition of surface around wellhead	Good								
PID Readings	0.4ppm - 2.3ppm								
Condition of subsurface	Good, no staining								
PID Readings	0.4ppm - 2.3ppm								
Sample taken? Location/Sample ID#	WH01-E@4' and FL01-R@4'								
Photo Number(s)	See attached								
Other observations regarding wellheads: None									
Summary									
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened: 6				Total number of samples collected: 2					
Highest PID Reading: 2.3 ppm				Total number of samples submitted to lab for analysis: 2					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted?		Yes		No	
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater?		Yes	No	Volume of groundwater removed prior to sampling:					
Free product observed?		Yes	No	Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:	-	Tank Battery Closure	-	Wellhead Closure	-	Pit Closure	-	Partially Buried Vault Closure	-
Site Name & COGCC Facility Number: R&R Farms 29L-441		Date: 11/18/2025			Remediation Project #: 38775				
Associated Wells: 05-123-41633		Age of Site: 2015			Number of Photos Attached: 2				
Starting point: (GPS coordinates and descriptions) (40.36505, -104.4681893) Starting point at wellhead									
End point: (GPS coordinates and descriptions) (40.3667097, -104.4681789) Ending point at separator									
USCS Soil Type: SW					Estimated Depth to Groundwater: >20' (ft)				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed									
Flowlines									
Flowline type	OGW								
Depth	4' (ft)								
Age	2015								
Length	~648' (ft)								
Construction Material	Steel								
Were flowlines pulled?	No								
Visual Integrity of lines	Good								
Visual impacts if trenched	None observed								
PID Readings if trenched	0.9 ppm	1.7 ppm							
Sample taken? Location/Sample ID#	FLR01@4'	FLR02@4'							
Photo Number(s)	1	2							
Other observations regarding on location flowlines: Flowline abandoned in place due to sharing a common trench with active lines.									
Summary									
Was impacted soil identified? <input checked="" type="radio"/> No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened: 2					Total number of samples collected: 2				
Highest PID Reading: 1.7 ppm					Total number of samples submitted to lab for analysis: 2				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:					Estimated spill volume:				
Lateral extent:					Volume of soil removed:				
Is additional investigation required?									
Was groundwater encountered during the investigation? <input checked="" type="radio"/> No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No				
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater? Yes No					Volume of groundwater removed prior to sampling:				
Free product observed? Yes No					Volume of groundwater removed post sampling:				
Total number of samples collected:					Total Volume of groundwater removed:				
Total number of samples submitted to lab for analysis:									